

CLAIMS

1. An image data generating apparatus for generating image data of a predetermined data format from a plurality of images corresponding to a plurality of viewpoints, comprising:

an information generating means for generating an integration information that indicates whether images from different viewpoints have been integrated or not and an image placement information that indicates a placement mode of the images from different viewpoints when the images are integrated,

wherein the data format includes the integration information and the image placement information.

2. The image data generating apparatus according to Claim 1, wherein the image placement information is information on the placement mode in which the viewpoint images are positioned by rotation of a predetermined angle.

3. The image data generating apparatus according to Claim 2, wherein the predetermined angle is one or plural among 0 degrees, 90 degrees clockwise, 180 degrees clockwise and 270 degrees clockwise.

4. The image data generating apparatus according to Claim

1, wherein the image placement information is composed of a placement direction information that indicates whether the images are arranged vertically or horizontally and a placement order information that indicates whether the images are arranged in an order of the viewpoints or in a reverse order of the viewpoints.

5. The image data generating apparatus according to Claim 1, wherein the image placement information is information on the placement mode of the images in which placements of the viewpoint images are positioned by rotation of a predetermined angle, information on the placement mode of the images in which positions of the images are inverted in a predetermined direction based on a positional relationship of the viewpoints, or information on a combined mode of the two placement modes.

6. The image data generating apparatus according to Claim 5, wherein the predetermined angle is one or plural among 0 degrees, 90 degrees clockwise, 180 degrees clockwise and 270 degrees clockwise, and the predetermined direction is one or plural among a horizontal direction and a vertical direction.

7. An image data reproducing apparatus for reproducing a

plurality of images corresponding to a plurality of viewpoints,
from image data of a predetermined data format, comprising:

an analyzing means for analyzing the predetermined data
format,

5 wherein the analyzing means analyzes an integration
information that indicates whether images from different
viewpoints have been integrated or not and an image placement
information that indicates a placement mode of the images
having been integrated, and reproduces the plurality of images
10 using the integration information and the image placement
information.

8. The image data reproducing apparatus according to Claim
7, wherein the image placement information is information
15 on the placement mode in which the viewpoint images are
positioned by rotation of a predetermined predetermined angle.

9. The image data reproducing apparatus according to Claim
8, wherein the predetermined angle is one or plural among
20 0 degrees, 90 degrees clockwise, 180 degrees clockwise and
270 degrees clockwise.

10. The image data reproducing apparatus according to Claim
7, wherein the image placement information is composed of
25 a placement direction information that indicates whether the

images are arranged vertically or horizontally and a placement order information that indicates whether the images are arranged in an order of the viewpoints or in a reverse order of the viewpoints.

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11. The image data reproducing apparatus according to Claim 7, wherein the image placement information is information on the placement mode of the images in which placements of the viewpoint images are positioned by rotation of a
10 predetermined angle, information on the placement mode of the images in which positions of the images are inverted in a predetermined direction based on a positional relationship of the viewpoints, or information on a combined mode of the two placement modes.

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12. The image data reproducing apparatus according to Claim 7, wherein the predetermined angle is one or plural among 0 degrees, 90 degrees clockwise, 180 degrees clockwise and 270 degrees clockwise, and the predetermined direction is
20 one or plural among a horizontal direction and a vertical direction.